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EFG 107-901

United States Government

Department of Energy

memorandum

DATE:

REPLY TO

ATTN OF: EM-453 (J. Ciocco, 3-7459)

SUBJECT: Comments for Draft Technical Memorandum-13 for Final Phase I Resource Conservation and Recovery Act Facility Investigation/Remedial Investigation Work Plan, Operable Unit 5, July 1993

TO: R. Schassburger, Rocky Flats Office

The Office of Southwestern Area Programs, Rocky Flats (RF) Branch, has reviewed the "Draft Technical Memorandum (TM) Number 13, Addendum to Final Phase I Resource Conservation and Recovery Act Facility Investigation/Remedial Investigation Work Plan, Human Health Risk Assessment, Model Description for Operable Unit (OU) 5," document. Please address these comments during the document finalization process.

Our main concerns with the document are as follows: The RF Interagency Agreement (IAG) states in Section VII D.1.a, page 32, that "the Department of Energy shall submit for review and approval a description of the fate and transport models that will be utilized, including a summary of the data that will be used with these models. Representative data shall be utilized and the limitations, assumptions, and uncertainties associated with the models shall be documented." Ambiguity exists in the IAG, however, regarding whether a TM on modeling must to be issued for every OU. The present document is quite generic for an OU-specific document, and the same models are used at different OUs. The document contains very little OU-specific information. Of particular importance is the relationship of the model with the sampling sites (i.e., is the information being collected in the field sufficient to run the models or must assumptions be made regarding key parameters for model input?). In order to avoid duplication of effort, the idea of generating one document describing models that may be used site-wide, including general descriptions of limitations and selection criteria should be proposed to the regulators. Appropriate models would then be selected on a case-by-case basis at each individual OU based on the selection criteria. OU-specific issues and parameter values used as input to the models would then be appended to the Exposure Assessment TM for that OU.

Please contact me at (301) 903-8191 or Jeff Ciocco at (301) 903-7459 if you have any questions regarding these comments.

Autar Rampertaap

Autar Rampertaap
Chief

Rocky Flats Branch
Rocky Flats/Albuquerque Production Division
Office of Southwestern Area Programs

Attachment

cc w/o attachment:
R. Greenberg, EM-453
J. Hartman, RF

ADMIN RECORD

A-OU05-000259

DOCUMENT REVIEW: TECHNICAL MEMORANDUM NUMBER 13
ADDENDUM TO FINAL PHASE I RESOURCE CONSERVATION AND
RECOVERY ACT FACILITY INVESTIGATION WORK PLAN
HUMAN HEALTH RISK ASSESSMENT MODEL DESCRIPTION
FOR OPERABLE UNIT NUMBER 5, WOMAN CREEK PRIORITY DRAINAGE
ROCKY FLATS PLANT
PUBLISHED: JULY 29, 1993

GENERAL CONCERNS

1. The document would be more logically presented as an appendix to the corresponding Exposure Assessment Technical Memorandum (TM) for Operable Unit (OU) 5. Fate and transport modeling is basically a part of the exposure assessment process. As it is, the first two chapters of this TM repeat materials already presented in the Exposure Assessment TM.
2. The document contains no analyses of the uncertainties and limitations associated with the application of the models at either the Individual Hazardous Substance Site (IHSS) or OU level, and it is questionable as to the appropriateness of such a document until lists of Contaminants of Concern (COCs) have been completed at the particular OU. If the TM is to be an OU-specific document, it would seem that it would be completed after COCs are identified and preliminary screening of IHSSs is conducted. For example, the need for soil gas transport modeling would be based on whether Volatile Organic Compounds were present at significant levels at individual sites.
3. While the model descriptions are not inappropriate, much more emphasis should be placed on whether available data are likely to support the proposed modeling and on the likely uncertainties associated with the modeling results. The following data related issues should be discussed:
 - The available applicable data that has already been collected;
 - The potential availability and accuracy of site-specific model inputs;
 - The ability to characterize the source term, and
 - The ability to calibrate transport models by reproducing the current spatial distribution of contamination with the model.
4. The document contains no discussion of models to be used for determining atmospheric deposition onto plants and soil-to-plant coefficients. Although the plant uptake pathway is not currently designated as a pathway to be modeled, the deposition pathway is listed as insignificant but will be included in modeling activities.

6. Sec. 3.1, p. 33, second paragraph: The second criterion for model selection is too generic. The specific objectives should be defined and evaluated in terms of the application based on individual IHSS conceptual models, screening approaches, and proposed sampling requirements, particularly for the source components. In addition, the analysis should include specific reference to exposure points for all scenarios in terms of the likelihood of producing meaningful exposure point concentrations at these locations. (Please see General Comments 2 and 3.)
7. Sec. 3.3.1, p. 40, third paragraph: This paragraph states that output from the simulations can be readily used to address resolution of uncertainty. This statement should be expanded to indicate exactly how uncertainties will be addressed and how these results will be used. It should be pointed out that sensitivity analyses will be performed to identify key model inputs that drive overall uncertainties. Future efforts could then be directed on key parameters for which site-specific data are not presently available. (Please see General Comments 2 and 3.)
8. Sec. 3.4.1, p. 43, second paragraph: This paragraph lists the inputs to the surface water model but omits output from the ground-water fate and transport models. Please include the output from ground-water models as critical input to the surface water models.
9. Sec. 3.6, p. 57-65: No models are presented for determining atmospheric deposition rates onto plants, despite the fact that this pathway will be included in the human health risk assessment. It is recommended that deposition models and parameters be developed and presented in this section. (Please see General Comment 4.)